

ABSTRACT

A configurable controller, comprising a configurable digital unit having a synchronization control module; a plurality of signal acquisition modules connected with said synchronization control module for receiving reference control data therefrom; and a control logic connected with said plurality of signal acquisition modules; a plurality of identical input cells respectively connected with said plurality of signal acquisition modules, each input cell additionally connected with a respective input pin of said controller; and a synchronizing signal generator connected with said synchronization control module and with said plurality of input cells, for sending synchronization signals to said input cells, wherein each input cell is operable to convert input signal parameters to time-based parameters; and wherein each signal acquisition module is configured to convert said time-based parameters to a required digital form.

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